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The interplay between multiple protostellar systems and their environment

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Classical models of star formation depict protostars and their disks developing in isolation. However, observations across various wavelengths and scales reveal that protostellar systems are connected and interact with their local environment—extending several thousands of astronomical units beyond their disks—even during later evolutionary stages (such as Class II disks). I will review our current understanding of interactions between protostellar systems and their surrounding environment, drawing from observations across diverse star-forming regions. I will discuss in more depth streamers—asymmetric infall channels that have gained significant attention in recent years. These structures transport material from thousands of astronomical units to protostellar disks. I will present recent observations of streamers around multiple systems, describe the techniques used to study them, and compare streamers found in single versus multiple systems. Finally, I will examine how this infall mechanism affects disks upon arrival, specifically addressing changes to disk structure and stability.

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